

Breeze Into Summer Top 10 Strategies for Saving Energy & Water

A Tele-Workshop brought to you by:



***Colorado Governor's Office of
Energy Management and Conservation***

May 17 & 18, 2006



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Breeze Into Summer

Today's Topics

- 1. Introduction to Rebuild Colorado**
- 2. Energy Management Training**
- 3. Top 10 Tips for Saving Energy & Water**



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Rebuild Colorado

**Round up
the savings...**



**to get better
buildings**

Identifying Opportunities

High energy bills?

Comfort problems?

Maintenance problems

Aging Equipment?



**Rebuild Colorado helps schools identify and assess
energy-saving projects in buildings,
and helps make those projects a reality!**



*Rebuild Colorado can help you choose
a path that's right for you*

High-performance building design?

Performance contracting?

Recommissioning?

Energy management?

Grants & in-house funding?

Bond initiative?



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Rebuild Colorado can help you succeed

Free Customized Services for You....

- *Engineering study* to identify efficiency opportunities
- *Energy performance contracting* facilitation and engineering support
- *Commissioning* facilitation to tune up your buildings
- *Energy education* for all grade levels
- *High performance design* assistance for better buildings and LEED™ projects
- *Energy management assistance* and training for improving day-to-day operations
- *Engineering project analysis* for bonds or Colorado Department of Education grants
- *Presentations* to decision-makers



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Call Us When You ...

- ✓ Are strategizing **to upgrade** your buildings
- ✓ Are **planning a new building**
- ✓ Are **developing projects** for capital improvement budgets (internal funds, bonds or grants)
- ✓ Want to **use energy savings to pay for projects**
- ✓ Want to **bring energy costs under control**
- ✓ Want to **improve comfort and solve maintenance problems**



Your Rebuild Colorado School Team

Linda Smith, OEMC Senior Program Manager

John Canfield, Schools Coordinator

Peter D'Antonio, Schools Energy Manager

Rob Pearson, OEMC Project Assistant



Energy Management Training

- Comprehensive, step-by-step, nine-month program brought to you by expert energy managers
- Tune in for timely interactive sessions 3-4 times per year
- Attend in-depth training workshops held in your region of Colorado 2-3 times per year
- Receive a certification of training documenting your participation
- For: K-12 school district staff including maintenance staff, energy managers, purchasing officials and others responsible for facility maintenance and improvements.

Coming Fall 2006



Energy Management Training

What You'll Learn:

- How to launch an effective energy management program in your district
- The importance of energy education and raising energy awareness
- Operations and maintenance training
- Identifying and implementing no-cost and low-cost improvements
- Setting up utility tracking
- Planning for facility improvements
- Identifying funding opportunities
- Resources to help you with new construction and major renovation projects
- Proven ways to integrate energy management into your district's business model.
- Valuable expertise to reap the savings year after year



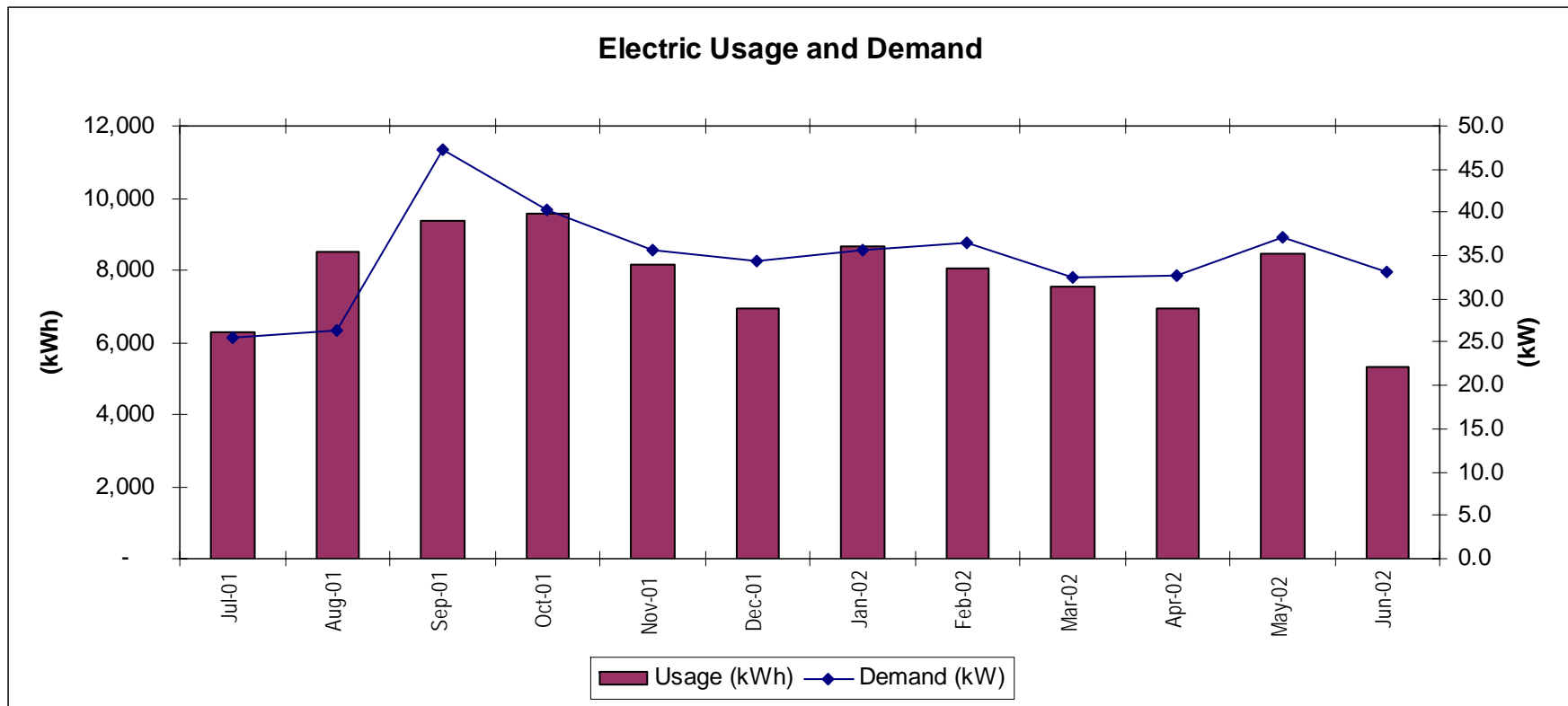
Breeze into Summer

Top 10 Tips for Summertime Savings –NO-COST strategies for success

1. Track Energy Use
2. Turn it off
3. Consolidate summer operations
4. Perform preventative maintenance
5. Be air conditioning conscious
6. Be water wise
7. Examine fuel purchasing strategy
8. Kitchen cutbacks
9. Have a plan
10. Expand your resources

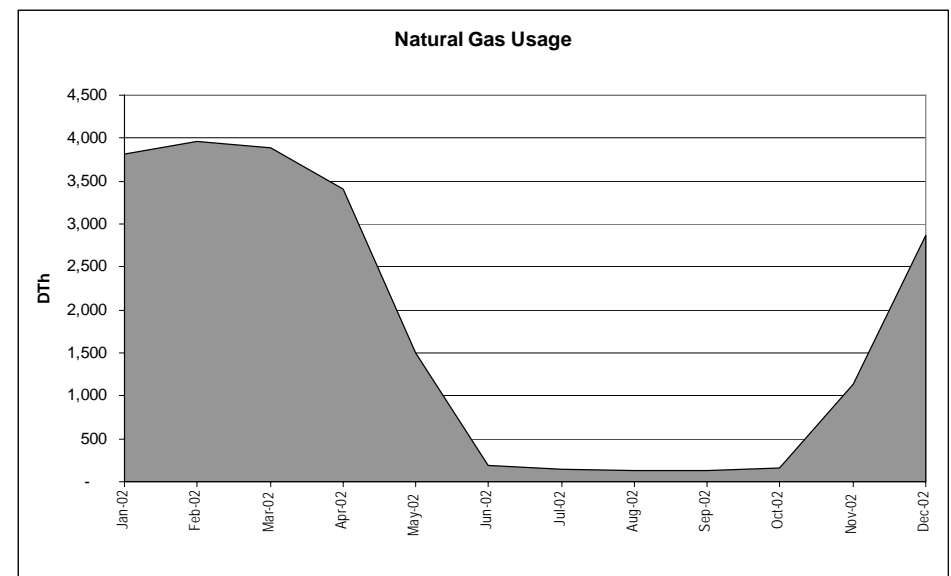


#1 – Track Energy Use



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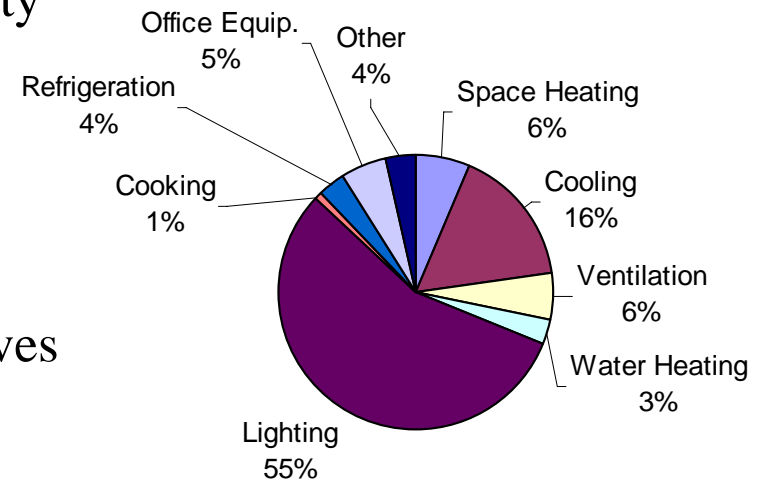
- Use spreadsheet or other tools to graph and analyze trend data
- Benefits
 - **Develop a baseline**
 - **See how and where energy is being used**
 - **Identify opportunity**
 - **Report results**



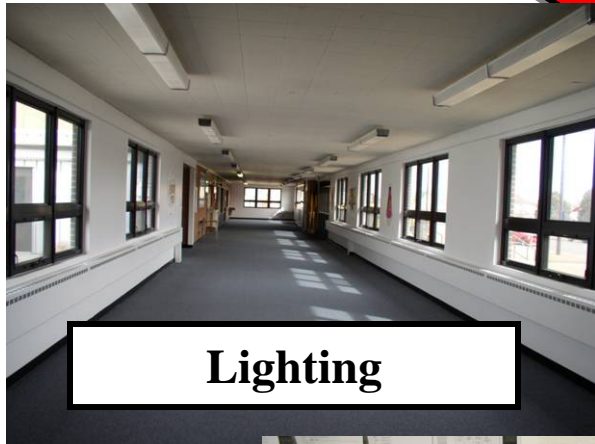
#2 - Turn It Off When Not in Use

- Lighting, Computers, Cooling account for up to 76% of electricity use
- Unplug vending machines
- Turn off water heaters that aren't being used (or down to lowest setting) Every 10°F reduction saves up to 13% on water heating
- Only when working in the area
- Unplug VCRs, TVs, water coolers etc when not using for extended periods.

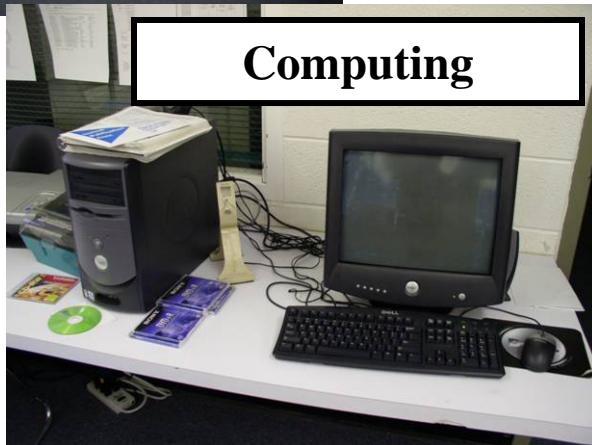
**Typical Energy End-Use for Electricity
Educational Facilities**



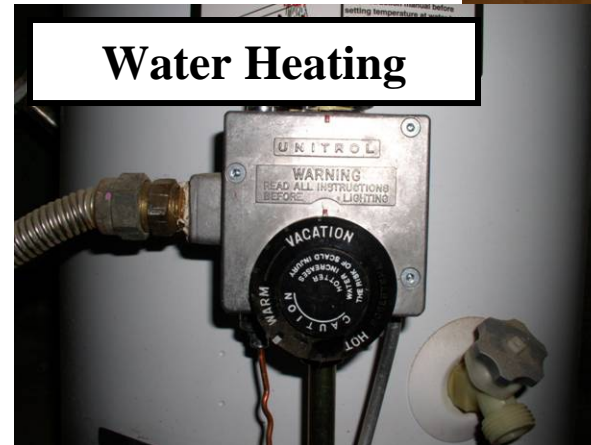
#2 - Turn It Off When Not in Use



Lighting



Computing



Water Heating



Vending

#3 – Consolidate Summer Operations

- Consolidate summer events to one school
- Contain evening activities to fewer days per week



#4 –Perform Preventative Maintenance on Equipment

- Quarterly/Annual PM
- Maintain central heating and cooling equipment
- Replace filters (minimum 40% efficient)
- Clean equipment
- Oil or grease motors
- Exercise newer shut-off valves
- Compile PM procedures
- Create a simple work order system
- Keep records
- Create a PM plan

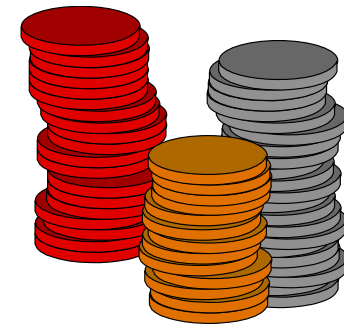


#4 –Perform Preventative Maintenance on Equipment



#5 – Be Air Conditioning Conscious

- Utilize A/C in area only when occupied
- Raise cooling setpoint
- Only allow systems on during hottest hours of the day with raised setpoint
- Close doors / blinds
- Use night purge



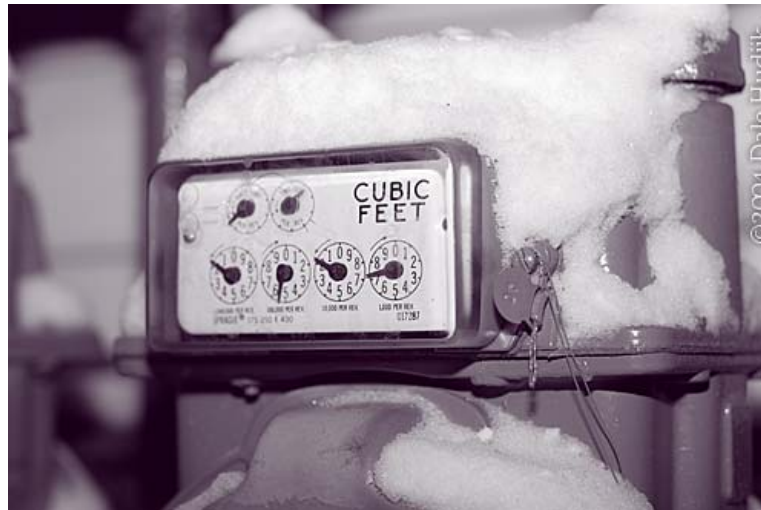
#6 – Be Water Wise

- Use dry cleanup before using water/spray washing
- Set mower blades to 2” to 3” to improve moisture retention
- Water between evening and morning
- Fix leaks. Leaks can account for up to 5% of total water use
1 drop of water per second = 60 gallons of water per week
- Install low flow aerators on your faucets.
Cuts flow rate by a least 50%



#7 – Review Fuel Purchasing Strategy

- Natural Gas
 - **Review natural gas purchasing strategy**
- Propane
 - **Historically July is time to buy**
 - **Prices could be 15% lower in summer**
 - **Volatility reportedly going away in the future**



#8 – *Kitchen Cutbacks Count*

- Consolidate freezers and coolers. Keep Full.
- Keep refrigerator at 36°F-38°F
- Keep freezer at 0°F
- Vacuum refrigerator coils
- Extinguish pilot lights (can apply to all heating equipment)



#9– Have a Plan

- Develop an Energy Action Plan
- Introduce Best Practices to Administration
- Incorporate goals into the strategic business plan
- Review, revise heating/cooling/occupancy schedules for the year
- Replace all battery powered equipment
- Review your budgets
- Schedule annual reports on progress

#10– Develop Resources

- Incorporate the fourth “R” – Resourcefulness
- Join CASDEM (Colorado Association of School District Energy Managers) www.casdem.org
- Sign up for Rebuild Colorado Energy Management Training
- Call our energy hotline with questions: 303-678-1108



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‘Sweat the Small Stuff’ Low-Cost/No-Cost Strategies

Savings example:

\$1.00/sf utility costs for a

40,000 sf small elementary school

At 5 to 10% savings,

**Total savings = \$2,000 to \$4,000/yr
for many years**



**Small savings can
add up!**

Review- Breeze into Summer

Top 10 No-Cost Tips for Summertime Savings

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Rebuild Colorado

*We're here to get you started...
and see you through*

Contact us:

303-866-2100 or 800-632-6662

www.colorado.gov/rebuildco

rebuildco@state.co.us



Rebuild Colorado – Upcoming Events

- **Making the Grade on Energy Management**
 - July 18, 2006 - Colorado Springs
<http://www.colorado.gov/rebuildco/events/index.htm>
- **Free Commissioning Seminars**
 - May 11, 2006 - Colorado Springs District 11
 - June 8, 2006 - Tri-State G&T, Westminster
 - June 22, 2006 - Fort Collins Utilities
 - email jporter@archenergy.com or call (303) 444-4149
- **High Performance Design Training**
 - June 20, 2006 – Westminster
 - June 21, 2006 – Colorado Springs
 - June 26, 2006 – Montrose
 - <http://www.colorado.gov/rebuildco/events/index.htm>
- **Rocky Mountain High Performing Schools Conference,**
 - Fort Collins - July 27-28, 2006, www.psdconference.org

